

What Is Claimed Is:

1. An automated teller machine comprising:
  - a bill recycle machine comprising:
    - 5 a bill deposit/withdrawal port for accepting bills inputted by a user or delivering bills to the user;
    - a bill discriminating unit for discriminating bills;
    - plural bill accommodating boxes that store deposited bills to be accommodated therein, store bills for withdrawal
    - 10 or store bills that are not used for the deposit and withdrawal transaction; and
    - a bill transport path that passes through the bill discriminating unit for connecting the deposit/withdrawal port with the bill accommodating boxes; wherein
  - 15 the plural bill accommodating boxes are vertically superimposed so that bills can be inputted to or delivered from a front side and a back side of the bill recycle machine and at least one of the plural bill accommodating boxes has a accommodating section that is divided into a front-side
  - 20 accommodating section and a rear-side accommodating section and a push plate that is independently operated to a front side and a rear side, whereby the front-side staking section and rear-side accommodating section can store bills of different denominations.

2. The automated teller machine according to claim 1,  
wherein the bill accommodating box having the front-side  
accommodating section and rear-side accommodating section is  
a recycle box in which both the front-side accommodating section  
5 and rear-side accommodating section store bills used for both  
deposit and withdrawal.

3. The automated teller machine according to claim 2,  
wherein the bill accommodating box having the front-side  
10 accommodating section and rear-side accommodating section has  
a monolithic structure.

4. The automated teller machine according to claim 3,  
wherein the bill accommodating box having the front-side  
15 accommodating section and rear-side accommodating section can  
be used as any one of a bill accommodating box, a load/recovery  
box, a non-circulating box and a storage box depending upon  
a position of installation in the deposit/withdrawal machine.

20 5. The automated teller machine according to claim 3,  
wherein the bill accommodating box having the front-side  
accommodating section and rear-side accommodating section can  
be defined to be used as any one of the bill accommodating box,  
load/recovery box, non-circulating box and storage box  
25 regardless of the position of installation in the

deposit/withdrawal machine.

6. The automated teller machine according to claim 4,  
comprising a function for delivering, from the non-circulating  
5 box, bills that are discriminated to be unusable for the  
withdrawal transaction at the bill discriminating unit and using  
them for the withdrawal transaction if they are discriminated  
to be usable for the withdrawal transaction at the bill  
discriminating unit.

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7. The automated teller machine according to claim 5,  
comprising a function for delivering, from the non-circulating  
box, bills that are discriminated to be unusable for the  
withdrawal transaction at the bill discriminating unit and using  
15 them for the withdrawal transaction if they are discriminated  
to be usable for the withdrawal transaction at the bill  
discriminating unit.

8. The automated teller machine according to claim 2,  
20 wherein the front-side accommodating section and rear-side  
accommodating section of the bill accommodating box are  
separated from each other to be independent.

9. The automated teller machine according to claim 8,  
25 wherein the bill accommodating box having the front-side

accommodating section and rear-side accommodating section can be used as any one of the bill accommodating box, load/recovery box, non-circulating box and storage box depending upon the position of installation in the deposit/withdrawal machine.

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10. The automated teller machine according to claim 8, wherein the bill accommodating box having the front-side accommodating section and rear-side accommodating section can be defined to be used as any one of the bill accommodating box, 10 load/recovery box, non-circulating box and storage box regardless of the position of installation in the deposit/withdrawal machine.

11. The automated teller machine according to claim 9, 15 comprising a function for delivering, from the non-circulating box, bills that are discriminated to be unusable for the withdrawal transaction at the bill discriminating unit and using them for the withdrawal transaction if they are discriminated to be usable for the withdrawal transaction at the bill 20 discriminating unit.

12. The automated teller machine according to claim 10, comprising a function for delivering, from the non-circulating box, bills that are discriminated to be unusable for the 25 withdrawal transaction at the bill discriminating unit and using

them for the withdrawal transaction if they are discriminated to be usable for the withdrawal transaction at the bill discriminating unit.

5        13. The automated teller machine according to claim 1, wherein the accommodating section is arranged on the bill transport path that connects the front side with rear side of the accommodating section, wherein bills delivered from the front-side accommodating section can be moved to the rear-side 10 accommodating section to be stored and bills delivered from the rear-side accommodating section can be moved to the front-side accommodating section to be stored.

14. The automated teller machine according to claim 2, 15 wherein the accommodating section is arranged on the bill transport path that connects the front side with rear side of the accommodating section, wherein bills delivered from the front-side accommodating section can be moved to the rear-side accommodating section to be stored and bills delivered from 20 the rear-side accommodating section can be moved to the front-side accommodating section to be stored.

15. The automated teller machine according to claim 8, wherein the accommodating section is arranged on the bill 25 transport path that connects the front side with rear side of

the accommodating section, wherein bills delivered from the front-side accommodating section can be moved to the rear-side accommodating section to be stored and bills delivered from the rear-side accommodating section can be moved to the

5 front-side accommodating section to be stored.

16. An operation method of an automated teller machine provided with plural bill accommodating boxes that are vertically superimposed to have a construction that bills can

10 be inputted to and delivered from a front side and a back side of a bill recycle machine and at least one of the plural bill accommodating boxes has a accommodating section that is divided into a front-side accommodating section and a rear-side accommodating section and a push plate that is independently

15 operated to a front side and a rear side, whereby the front-side staking section and rear-side accommodating section can store bills of different denominations, comprising the steps of:

deciding that one of the bill accommodating boxes is used as a load box;

20 deciding that another one or other plural boxes are used as recycle boxes; and

setting bills that are to be accommodated into one of the front-side and rear-side accommodating sections of the recycle box are set to the other one of the front-side and

25 rear-side accommodating sections of the load box.

17. An operation method of an automated teller machine provided with plural bill accommodating boxes that are vertically superimposed to have a construction that bills can  
5 be inputted and delivered from a front side and a back side of a bill recycle machine and at least one of the plural bill accommodating boxes has a accommodating section that is divided into a front-side accommodating section and a rear-side accommodating section and a push plate that is independently  
10 operated to a front side and a rear side, whereby the front-side accommodating section and rear-side accommodating section can store bills of different denominations, comprising the steps of:

deciding that at least a part of the bill accommodating  
15 boxes is used as a non-circulating box;

deciding that another one or the other plural bill accommodating boxes are used as recycle boxes;

passing bills that cannot be discriminated at the time of a withdrawal transaction to thereby be stored in a temporary  
20 storage box through the bill discriminating unit for discriminating again a denomination and authenticity thereof;

storing bills that are discriminable at the discrimination step into the recycle box; and

25 storing bills that are indiscriminable at the discrimination step into the non-circulating box.

18. An operation method of an automated teller machine provided with plural bill accommodating boxes that are vertically superimposed to have a construction that bills can

5 be inputted and delivered from a front side and a back side of a bill recycle machine and at least one of the plural bill accommodating boxes has a accommodating section that is divided into a front-side accommodating section and a rear-side accommodating section and a push plate that is independently

10 operated to a front side and a rear side, whereby the front-side staking section and rear-side accommodating section can store bills of different denominations, comprising the steps of:

deciding that the plural bill accommodating boxes are used as recycle boxes;

15 allocating the recycle box per denomination; and

deciding that one of the front-side and rear-side of the bill accommodating box allocated as the recycle box per denomination is used for a accommodating section for current bills and the other one is used for a accommodating section

20 for newly designed bills.